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senters, the united congregations, on Sundays, seldom exceed five or six persons! There is likewise a Presbyterian meeting-house, of the old-light, and near it a neat one belonging to Seceders.

The grey haze of evening now plainly announced, that I could not reach the end of my journey that night, so I entered the house of a former acquaintance who resided here. After some friendly inquiries, he invited me to stay with him that night, and having told him the extent of my tour, he proposed to accompany me the following morning, an offer which I gladly accepted.

Next morning we arose pretty early, and set off without waiting to take breakfast. Morning was not in her gayest attire, it being hazy, so much so that it threatened rain, and we had none of those early beauties so famed by the poets, as singing milk-maids, soaring larks, and birds warbling on each spray. To be brief, the gloomy silence of the morn was only now and then broken by the hoarse croak of the weather-wise crows, which is said to indicate rain; hence the old adage,

" When the crow does cry amain,
" Then you may be sure of rain."

Notwithstanding their gloomy forbodings, we were not deterred from proceeding, but I thought both took longer steps than usual, without assigning any cause to each other, till we were out of hearing their noise—perhaps each was ashamed to let the other know, that there still remained in us, in spite of sceptical opinions, a little of that superstition which we had imbibed in infancy.

After travelling about a mile, we passed near the ruins of Rath-sith, *alias*, Rashee church. It is said to have been founded by St. Patrick; perhaps one of the 365 which he is said to have erected for the conversion of the good people of this Island.

Travelling a little further through a country pretty well inhabited, we passed Dunamoy, literally, *Dunn-a-maigh*,—i.e. the fortress of the plain. It is one of those large mounts, or *moats*, as they are usually called here, which is encompassed by a deep fossè, and is one of those few relics of ancient times, which has been preserved by superstition; a belief being still pretty common, that they are the abode of fairies!

I observed the general observation, that from one *moat* another is always seen, to hold good here, a smaller being only a few fields off.

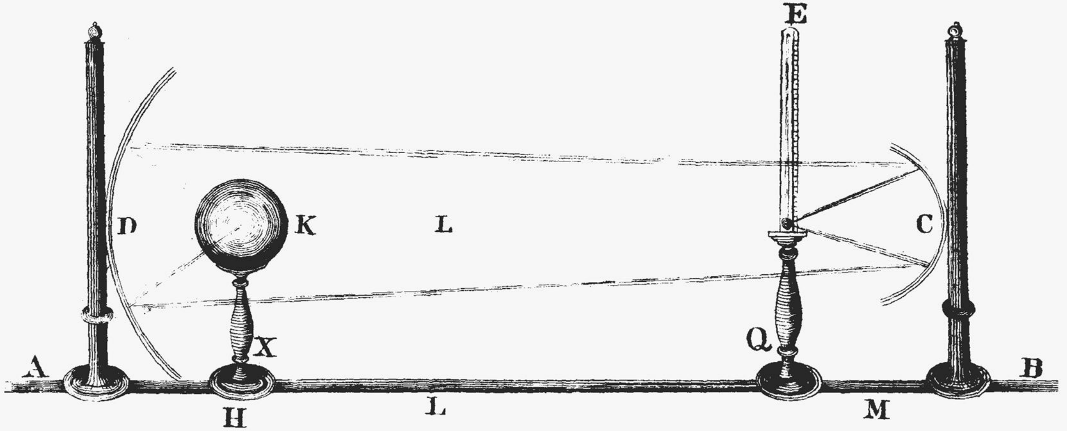
These mounts were the ancient forts and habitations of the chiefs of the country, prior to the erection of stone buildings, they were proportioned according to the wealth and power of the chief; near them the *Sept* resided, and to them they repaired on an alarm of danger.

(To be continued.)

To the Proprietors of the Belfast Magazine.

GENTLEMEN,

I TAKE the liberty of requesting you to publish in your Magazine, the singular result of a very simple experiment in optics, first made, I believe, by a medical gentleman, Dr. John Simpson, of this city. A small feather was plucked from the tail of a sparrow. Through the top of this feather, a lighted candle, placed about six feet from the observer, was attentively viewed. The convex side of the feather was turned to the eye of the spectator, and placed within half an inch of the pupil. Matters being thus arranged, the following beautiful phœnomena appeared.


E
D
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1st.—Various splendid images of the candle were produced.

2d.—Two strong lines of these images crossed each other.

3d.—The rays of light, resolved into their primitive component parts, were distinctly exhibited in the same order, as by the refractions of a prism, viz. red, orange, yellow, green, &c.

4th.—These colours were more vivid, and better defined, than those of the rainbow.

5th.—The strong lines of colours are never parallel to the interstices or ramifications of the feather, and therefore,

6th.—If any of your readers, who may wish to repeat the experiment, should gently move the feather in a circular direction before the eye, the whole phenomena will seem to revolve, like the vanes of a wind-mill, always forming the same angle with the interstices of the feather.

7th.—The apparent length of the luminous appearances, is directly proportioned to the distance at which the candle is viewed, and therefore by gradually retiring from the ignited body, the visible magnitude of the line of images will be increased ad libitum.

8th.—By placing three or more candles near each other, in the same plane, you may make at pleasure, various beautiful lines, which will cross each other, and form parallelograms of glowing light, and many other fantastical appearances.

If it should be inconvenient for any of your readers, who may wish to repeat this experiment, to procure a sparrow's feather, the same phenomena will be found to result, from one of the small feathers plucked from the tail of a chicken. Care however must be taken in both cases, not to view the candle through the *downy-end* of the feather, but through that portion of it, which is most remote from the quilly part.

I am not at present able to account for the phenomena that result from this experiment. Perhaps the rays of light may be refracted and decomposed by the oily fluid, which nature has diffused over the feathers of birds, as a protection against rain, and watery vapour held in solution by the atmosphere. A literary gentleman of Belfast, Mr. Knox, is now engaged in a very able and accurate investigation of the nature and result of the laws of refracted light. To his attention I submit the above experiment.

Having thus commenced a correspondence with you, permit me also to request your insertion of the following ingenious experiment made by Professor Hope, in Dec. 1808, which seems to evince the positive existence of a fluid of cold, in direct opposition to the commonly received theory, that cold is nothing more than the mere absence of caloric or matter of heat.

Upon a bench represented in the figure subjoined, by the line A B, were placed two concave reflectors, D and C, the reflector C nearly in the focus of the greater reflector D; and in the focus of C, the bulb of a thermometer E supported by the pedestal Q. At a point in the line A B marked H, a freezing mixture, enclosed in a glass ball K, was supported on the pedestal X. On this arrangement of the apparatus, the mercury in the thermometer, whose bulb was in the focus of C, fell considerably below the temperature of the atmospheric air surrounding the apparatus. The thermometer E was then moved along the line A B, so that the bulb was still kept in the line D K C, till it reached the points L L, very near the freezing mixture K, when the mercury rose to the temperature of the atmospheric air. The bulb of the thermometer was then placed in the point above M, in the line D K C, between the true focus of the reflector C, and the said reflector C itself, when no change took place, the mercury indicating the temperature of the atmospheric air, and only sinking when placed in the focus of the reflector C. Now this can only be explained by admitting cold to be an actual fluid, which emanating from K, was reflected from D to C, and concentred in the focus of C. On the common theory, the mercury should have sunk lowest, when it made its nearest approach to the freezing mixture K, for there it should have parted with its caloric, in order to keep up, as far as possible, the equilibrium of its temperature with that of K.

I am your obt. servant,
Armagh, Feb. 2d, 1812. J.S.

For the Belfast Monthly Magazine.

ON TEACHING CATECHISMS IN FREE SCHOOLS.

IN reading some of the controversial writings of the partisans of the Bell and Lancasterian systems of education, my attention has been turned to the important subject of introducing creeds and catechisms into schools for the education of the poor. Joseph Lancaster's plan of confining his instructions to reading, writing, arithmetic, &c. without interfering with the catechisms of the various religious sects, is decidedly superior to the plan pursued by Dr. Bell. The partisans of Dr. Bell's system of education maintain the opinion, that the church of England catechism is an indispensable addition to instruction in spelling and reading.

Every benevolent mind must feel gratified at finding so much attention paid to the education of the poor; but because they receive education gratis, must they be continually reminded of their dependent condition? A man who can afford to pay a few pence weekly for the education of his child, can exercise an independent judgment, and have his child instructed as he pleases; but the poor man who sends his child to a free school, where the church of England catechism forms a part of the system of education, must permit his child to repeat the catechism as the condition of his receiving instruction in the common routine of school learning. It would be as reasonable, before relieving the distress of a poor family, to require that they should repeat a catechism to accord with the peculiar opinions of the person who relieved them, as to unite a creed to the benefit conferred by teaching to read and write. Children, in general, are incapable of annexing any ideas of religion to a catechism, they merely know they must repeat it by rote as a task, and there is generally an unpleasant association of ideas in the mind of a child connected with a task.

The introduction of catechisms into schools where the children belong to different religious sects, has a tendency to keep alive the restless spirit of bigotry and intolerance which has already been so injurious to society; it makes the line of distinction between Catholics and Protestants still more strongly marked: and even if Catholics are exempted from repeating a catechism contrary to their parents' ideas of religion, an unpleasant distinction is made which destroys that equality which is preserved in a school where a catechism is not introduced. Many of the parents of children at free schools are dissenters, and they cannot consistently approve of their children being taught the church of England catechism.